Chapter 579: Classification Attainment Evaluation Using Biological Criteria for Rivers and Streams

Response to Comments for Adoption of the Rule

The letter in parentheses at the end of the comment corresponds to the commenters noted below. Numbered comments and responses below reflect the substantive concerns expressed in oral or written comments.

Commenters:

A) Michael Barden, *Maine Pulp and Paper Association*
B) Nick Bennett, *Natural Resources Council of Maine*
C) Len Bobinchock, *US Department of the Interior, Acadia National Park*
D) Valerie Carter, R. Andren and E. Payne, *Bangor Area Citizens Organized for Responsible Development (BACORD)*
E) Francis Drummond, University of Maine, Orono
F) Paul Leeper, Moody Mountain Environmental
G) Matt Scott, Individual
H) Stephen Silva, US Environmental Protection Agency
I) F. Allen Wiley, FPL Energy

1) In Section 3 G the applicability of the biocriteria model to waters above or below man-made dams should be clarified (A , F) or changed to exclude its use in these habitats (I).

Response: The Department agrees that clarification is needed but does not agree that the model is inappropriate for all waters affected by hydroelectric dams. The language in Section 3(G)(1) has been changed to state that the model is not suitable for use in thermally stratified areas of impoundments or in depositional areas of impoundments.

The Department offers the following justification for use of the biocriteria model to assess the impacts of hydroelectric dam operations:
The Water Quality Classification law has provided for lower biotic expectations caused by river impoundment by lowering the aquatic life standard that must be met within impoundments to Class C. The Biological Monitoring Methods manual referenced in the rule prescribes that the standard sampling method applies only in scoured, hard-bottom habitats and these conditions do occur in run-of-river impoundments as a result of periodic flushing from snowmelt and storm events. The dataset used to construct the statistical model described by the rule included data from 31 impoundment samples, thus the model has been calibrated to be responsive to impounded conditions. Eleven of the impounded samples in the

model-building dataset had a statistical model outcome showing attainment of Class A or B standards and seven attained Class C standards. Of the remaining impoundment samples that were non-attainment, nine have attained Class C or higher model outcomes in subsequent sampling events, due to management changes. The Department has applied the biocriteria model in run-of-river impoundments and their outlets for over 10 years. The 401 Water Quality Certification record indicates that the biocriteria model has been responsive to real changes in waterbody condition in that changes in license conditions imposed as results of the biological findings have resulted in subsequent attainment of designated uses in many locations affected by dams.

A similar record exists for downstream flow issues. West Buxton Dam and Skelton Dam on the Saco River are examples of facilities that, at the start of the re-licensing process, did not attain Class C aquatic life in reaches downstream of the dam due to inadequate release of instream flow. Increased flow release was required as a condition of re-licensing and subsequent sampling resulted in attainment of Class B for West Buxton and Class C for Skelton.

2. How does the Department intend to apply the model in tidally influenced or saline situations? (A)

Response: The Methods Manual (incorporated into the rule by reference), provides specific criteria describing appropriate sampling habitats for application of the statistical model. Habitats that are dominated by tidal effects may affect performance of the model and thus may be subject to the use of professional judgment as stated in the rule. Regarding salinity, the rule only applies to freshwaters. Boundaries for class SA, SB and SC (marine/estuarine) waters are set at a salinity of greater than 0.5 ppt.

3. The rule should not allow for lowering of a model outcome by Professional Judgement. Change Section 3(G)(1)(b) to state that the Department may "*vacate*" a model outcome and change it to indeterminate, rather than "*lower*" a finding through use of Professional Judgement (F).

Response: No change. The Department's position is that sufficient interpretive expertise exists to allow for lowering of a statistical model finding in cases where there is "documented, substantive evidence that the narrative aquatic life criteria for the assigned class are not met". The Department's ability to use the Professional Judgement provisions in the rule would be biased if the Department were only allowed to raise a model outcome.

4. It is necessary for the Department to consider all relevant monitoring data, evaluating both point and non-point sources, when determining what parties are responsible for costs associated with implementation of the rule. (A)

Response: The Department agrees with the importance of adequately characterizing all possible causes of observed impairment. The Department uses a variety of interpretive tools such as new US Environmental Protection Agency protocols designed to formally characterize and document causes of biological impairment (Stressor Identification Guidance Document- EPA/822/B-00/025). It should be noted that the Maine DEP Biological Monitoring Program was asked to contribute a case study for use in that national document due to the credibility of our interpretive experience.

5. The Department should ensure that the classification attainment evaluation procedure evolves to increase the flexibility of the assessment approach (F) and to include other parameters such as organism health (B).

Response: The Department agrees. However, the biocriteria rule only applies to the current established methods. The Department will improve and upgrade the classification evaluation approach as needed, and as resources allow.

6. The Department should make available the custom computer program that computes the statistical model described by the rule.

Response: The Department agrees. ~~and is consulting with the Attorney General's Office on issues of copyright protection and security of the integrity of the model against inadvertent or intentional tampering. The resource demands of technical support for external user applications is a Department concern that must be addressed.~~ Any official Department decisions on aquatic life classification attainment will be based on outcomes of the model program and database that is solely under the direct quality control of the Department.

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Chapter 579: Classification Attainment Evaluation Using Biological Criteria for Rivers and Streams

Response to Comments for Adoption of the Rule, page 3, question #6 .

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